21-157

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info

In order to reduce the demand on A&A time, equipment from the Design Unit should not be turned over to A&A for final check until after Design has checked the eq. as being ready for delivery. Re note deficiencies — especially the shorting difficulty

VCP

STANDARD FORM NO. 64

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Office Memorandum • UNITED STATES GOVERNMENT

TO : Project Files - Design Unit

DATE: 14 August 1957

FROM : [redacted]

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SUBJECT: A Cursory Evaluation of the Engineering Type CV-2 Transistorized Frequency Converter

1. The CV-2 is a miniature transistorized radio frequency converter covering a frequency range of 6 to 12 megacycles with the output frequency peaked at approximately 1500 kc. The converter is intended to be used in conjunction with a standard broadcast receiver.

2. The following comments are noted:

a. The measured operational battery drain was 325 ua.

b. Both the antenna coil and the output transformer were altered during the test to meet specifications.

c. On several occasions components mounted on the printed circuit board shorted to the case of the converter.

d. Intermittent troubles were encountered because of improper ground connections between the printed circuit board and the case of the converter. The converter case being B+ return.

e. The oscillator transistor was defective and had to be replaced.

f. No provision for insulating the antenna lead-in from the case was provided.

g. Screws fastening the printed circuit board to the case extend beyond the bottom of the case.

h. The trimmer condenser control knob became loose after a short period of operation.

i. No antenna, ground, or battery terminal markings were provided.

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j. The crystal opening was insufficient to permit proper seating of the crystal.

k. No internal spurious frequencies were noted when the check was made with the broadcast receiver.

l. The check for external spurious frequencies indicated that numerous signals were present.

3. In order to establish the relative gain of the converter a comparison check of the receiver and the converter-receiver was made at the frequencies of 6, 9, and 12 megacycles. An RCA standard wave broadcast receiver was used in the evaluation. The relative gain at 6 megacycles was 76, at 9 megacycles 158, and at 12 megacycles 233.

4. After completion of the cursory evaluation the CV-2 converter was returned to the Design Section for alterations and corrections.

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Lab/GLG/HK/bao (14 Aug. 57)

Distribution:
Original & 1 - Addressee
1 - A&A
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